

What is claimed is:

1. A band-pass filter having a ladder-type circuit including first and second terminals whose characteristic impedances are  $Z_0$ , and series elements and shunt elements disposed between a first terminal and a second terminal, each of the series elements and shunt elements containing a film bulk acoustic resonator, wherein assuming that characteristic impedance of any one of the series elements is  $Z_1$  and that characteristic impedance of any one of the shunt elements is  $Z_2$ , the characteristic impedances  $Z_0$ ,  $Z_1$ , and  $Z_2$  have a relation of  $1 < (Z_1/Z_0) < 2$  and  $0.5 < (Z_2/Z_0) < 1$ .

2. The band-pass filter according to claim 1, wherein the characteristic impedances  $Z_0$ ,  $Z_1$ , and  $Z_2$  have a relation of  $1.3 < (Z_1/Z_0) < 1.7$  and  $0.6 < (Z_2/Z_0) < 0.8$ .

3. The band-pass filter according to claim 1, wherein the film bulk acoustic resonator comprises a substrate having a via-hole of substantially vertical taper angle so as to penetrate the substrate from one surface to the other surface thereof; and a stack containing a piezoelectric layer and a first and second electrodes sandwiching the piezoelectric layer, the stack is held on the one surface of the substrate, and a portion of the stack functions as a vibration portion facing the via-hole.